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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/994,888	11/28/2001	Christian Georg Gerlach	Q66930	8045

7590 09/20/2004

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EXAMINER	
VO, HUYEN X	
ART UNIT	**PAPER NUMBER**
2655	

DATE MAILED: 09/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/994,888	GERLACH ET AL.	
	Examiner	Art Unit	
	Huyen Vo	2655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *28 November 2001*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-9* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-9* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *28 November 2001* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date *2/7/02*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless – (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-2, 4-6, and 8-9 are rejected under 35 U.S.C. 102(b) as being anticipated by Miyasaka et al. (US Patent No. 5493647).

3. Regarding claim 1, Miyasaka et al. disclose a process for storing audio signals, in particular speech messages, comprising the following process steps:

(a) digitalization of incoming audio signals s(n) (*AD converter 11 in figure 1*);

(b) storage of the digitalized audio signals a(n) in a memory in areas with a(n) first memory size and bit rate (*col. 10, ln. 30-67*);

(c) monitoring of the occupancy of the memory (*col. 11, ln. 1-33*);

(d) determination of the current occupancy rate, in particular full occupancy of the memory (*col. 11, ln. 1-33*);

(e) reduction of the memory size and bit rate for the already stored audio signals a(n) to a second, smaller value as soon as a predetermined occupancy rate of the memory is reached (*col. 11, ln. 1-67*); and

(f) occupation of the memory space released in the memory at least in part by newly incoming audio signals s(n) (*col. 11, ln. 1-67 or referring figures 5-10*).

4. Regarding claim 9, Miyasaka et al. disclose a device for storing audio signals, in particular speech messages, comprising a means for digitalizing incoming audio signals s(n), a memory means for the storage thereof, and a control device,

wherein the memory means comprises areas with a first memory size for storing the digitalized audio signals a(n) (*Memory 18 in figure 1*),

wherein the control device comprises means for detecting an occupancy of all the areas of the memory means (*Write Control 19 in figure 1*),

wherein when it is determined that a predetermined occupancy rate, in particular full occupancy, of the areas of the memory means is reached (*col. 11, ln. 1-33*), the digitalization means can effect a compression of the already stored audio signals a(n) from the first memory size to a second, smaller memory size, and wherein the control device can store newly incoming audio signals s(n) in released memory space in the memory means (*col. 11, ln. 1-67, and referring to figures 5-10*).

5. Regarding claim 2, Miyasaka et al. further disclose a process according to claim 1, wherein additionally a reduction of the memory size and bit rate of the already stored audio signals a(n) takes place in pauses in use when no newly incoming audio signals s(n) are received (*col. 11, ln. 10-25, memory space is freed up before any new audio signals are received*).

6. Regarding claim 4, Miyasaka et al. further disclose a process according to claim 1, wherein the incoming audio signals s(n) are coded, layered hierarchically, in levels of information blocks of different importance, and that the reduction in the memory size in step (e) takes place by successive omission of the respective lowest level or levels of the hierarchically layered information blocks (*col. 10, ln. 30 to col. 11, ln. 67*).

7. Regarding claim 5, Miyasaka et al. further disclose a process according to claim 4, wherein the layering of the different information blocks takes place in accordance with at least one pre-determinable importance criterion (*col. 14, ln. 30-56*).

8. Regarding claim 6, Miyasaka et al. further disclose a process according to claim 5, wherein the middle frequency of a frequency band contained in the audio signal s(n) is selected as importance criterion (*col. 13, ln. 36-53 and col. 14, ln. 50-64, the middle frequency band contains most of the signal's energy, thus it is assigned with a higher number of bits to minimize quantization error*), and that if necessary in step (e) the upper frequencies of the audio signal are omitted (*col. 45 to col. 17, ln. 38, upper frequency bands may be omitted if their disappearance does not cause degradation to the signal quality*).

9. Regarding claim 8, Miyasaka et al. further disclose a process according to claim 1, wherein 100% of the memory space available in the memory is preset as the occupancy rate of the memory from which a reduction of the memory size and bit rate

takes place in step (e) (*Limited memory 18 in figure 1 is initially empty and is corresponding to zero occupancy rate, and 0% memory space available corresponds to 100% occupancy rate*).

Claim Rejections - 35 USC § 103

10. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

11. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasaka et al. (US Patent No. 5493647) in view of Shinichi (JP Patent Pub. No. 02-305053).

12. Regarding claim 3, Miyasaka et al. fail to disclose a process according to claim 1, wherein the reduction of the memory size in step (e) takes place by recoding the already stored audio signals a(n) with a lower bit rate than upon their input storage in step (b). However, Shinichi teach that the reduction of the memory size in step (e) takes place by recoding the already stored audio signals a(n) with a lower bit rate than upon their input storage in step (b) (*official translated abstract*).

Since Miyasaka et al. and Shinichi are analogous art because they are from the same field of endeavors, it would have been obvious to on of ordinary skill in the art at

the time of invention to modify Miyasaka et al. by incorporating the teaching of Shinichi in order to minimize the degradation in recording quality.

13. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Miyasaka et al. (US Patent No. 5493647) in view of Esteban et al. (US Patent No. 4051470).

14. Regarding claim 7, Miyasaka et al. further disclose a process according to claim 5, that if necessary in step (e) one or more higher stages of the parametric representation are disregarded (*col. 45 to col. 17, ln. 38, upper frequency bands may be omitted if their disappearance does not cause degradation to the signal quality*), but fail to specifically disclose a mean error, preferably a mean quadratic error of a parametric representation of the audio signal s(n), in particular of a multi-stage vector quantization, is selected as importance criterion. However, Esteban et al. teach a mean error, preferably a mean quadratic error of a parametric representation of the audio signal s(n), in particular of a multi-stage vector quantization, is selected as importance criterion (*col. 2, ln. 1-67*).

Since Miyasaka et al. and Esteban et al. are analogous art because they are from the same field of endeavors, it would have been obvious to on of ordinary skill in the art at the time of invention to modify Miyasaka et al. by incorporating the teaching of Esteban et al. in order to obtain the best representation of the coded signal.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Huyen Vo whose telephone number is 703-305-8665. The examiner can normally be reached on M-F, 9-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 703-305-4827. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Examiner Huyen X. Vo

September 14, 2004

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SUSAN MCFADDEN
PRIMARY EXAMINER